

**COMBINED AMENDMENT & PETITION FOR EXTENSION OF  
TIME UNDER 37 CFR 1.136(a) (Small Entity)**

Docket No.  
Canatxx-006:CIP

In Re Application Of: **Hill, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/601,604	June 23, 2003	Igor N. Borissov	021897	3628	8916

Invention:

**Underground Gas Storage with Short Term Reversible Flow for Use in Arbitrage/Trading**

**COMMISSIONER FOR PATENTS:**

This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of September 21, 2007 in the above-identified application.  
*Date*

The requested extension is as follows (check time period desired):

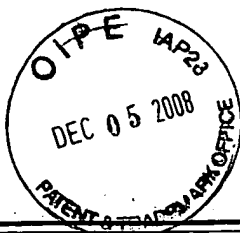
☐ One month    ☒ Two months    ☐ Three months    ☐ Four months    ☐ Five months

from: December 21, 2007    until: February 21, 2008  
*Date*    *Date*

Applicant claims small entity status. See 37 CFR 1.27.

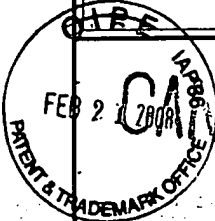
The fee for the amendment and extension of time has been calculated as shown below:

CLAIMS AS AMENDED					
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	8 -	41 =	0	x \$25.00	\$0.00
INDEP. CLAIMS	2 -	4 =	0	x \$105.00	\$0.00
FEE FOR AMENDMENT					\$0.00
FEE FOR EXTENSION OF TIME					\$230.00
TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME					\$230.00



**COMBINED AMENDMENT & PETITION FOR EXTENSION OF  
TIME UNDER 37 CFR 1.136(a) (Small Entity)**

Docket No.  
Canatxx-006:CIP




**CANCELLED**

The fee for the amendment and extension of time is to be paid as follows:

- ☒ A check in the amount of **\$230.00** for the amendment and extension of time is enclosed.
- ☐ Please charge Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_
- ☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. **13-2166**
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. **13-2166**
- ☐ Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

  
Signature

Dated: February 21, 2008

Ryan S. Christensen  
Reg. No. 60,291  
The Matthews Firm (Customer No. 021897)  
2000 Bering Drive, Suite 700  
Houston, Texas 77057  
US  
713-355-4200 Telephone  
713-355-9689 Facsimile

cc:

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
Signature of Person Mailing Correspondence

\_\_\_\_\_  
Typed or Printed Name of Person Mailing Correspondence

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**Applicant(s): **Ross Hill**

Docket No.

**CANATXX6:CIP**

Application No.

**10/601,604**

Filing Date

**23 June 2003**

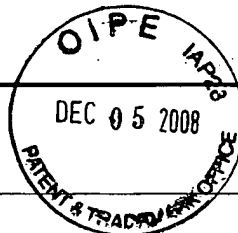
Examiner

**Igor N. Borissov**

Customer No.

**021897**

Group Art Unit

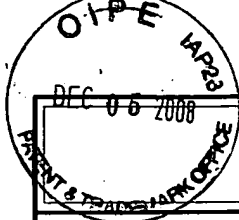
**3628**Invention: **Underground Gas Storage with Short Term Reversible Flow Operable for Use in Arbitrage/Trading**

I hereby certify that the following correspondence:

**Transmittal Letter (General - Patent Pending), and all documents referenced therein***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

**5 Dec. 2008***(Date)***Dean C. Brehm***(Typed or Printed Name of Person Mailing Correspondence)*  
*(Signature of Person Mailing Correspondence)***EV 516733988 US***("Express Mail" Mailing Label Number)***EV516733988US****Note: Each paper must have its own certificate of mailing.**



**TRANSMITTAL LETTER**  
**(General - Patent Pending)**

Docket No.  
CANATXX6:CIP

In Re Application Of: Ross Hill

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/601,604	23 June 2003	Igor N. Borissov	021897	3628	8916

Title: Underground Gas Storage with Short Term Reversible Flow Operable for Use in Arbitrage/Trading

COMMISSIONER FOR PATENTS:

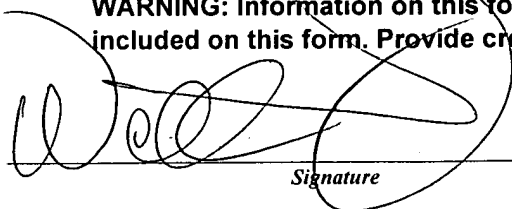
Transmitted herewith is:

1) Return Postcard; 2) Check No. 23956 in the amount of \$1,920.00 (RCE Fees [\$810.00] & Three Month Extension Fee [\$1,110.00]); 3) Certificate of Mailing by Express Mail (EV 516733988 US); 4) Transmittal Letter (General - Patent Pending); 5) Petition for Extension of Time; 6) Request for Continued Examination (RCE) Transmittal; 7) Copy of Response to Non-Final Office Action, filed 21 Feb. 2008; 8) Copy of Final Office Action dated 25 June 2008.

in the above identified application.

- ☐ No additional fee is required.
- ☒ A check in the amount of \$1,920.00 is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 13-2166 as described below.
- ☐ Charge the amount of
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.
- ☐ Payment by credit card. Form PTO-2038 is attached.

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Signature

Dated: 5 Dec. 2008

William E. Johnson, Jr.  
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2000 Bering Drive, Suite 700  
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US  
713-355-4200 - Telephone  
713-355-9689 - Facsimile

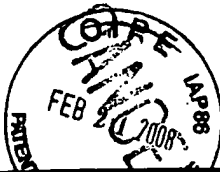
CC:

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(Date)

Signature of Person Mailing Correspondence

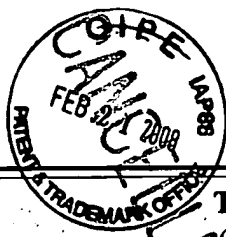
Typed or Printed Name of Person Mailing Correspondence



2-22-08

*[Handwritten signature]*

<b>CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)</b> Applicant(s): <b>Hill, et al.</b>			Docket No. <b>Canatxx-006:CIP</b>	
Application No. <b>10/601,604</b>	Filing Date <b>June 23, 2003</b>	Examiner <b>Igor N. Borissov</b>	Customer No. <b>021897</b>	Group Art Unit <b>3628</b>
Invention: <b>Underground Gas Storage with Short Term Reversible Flow for Use in Arbitrage/Trading</b>				
<p>I hereby certify that the following correspondence:</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"><b>Transmittal Letter (General-Patent Pending), and all documents referenced therein</b></div> <p style="text-align: center;"><i>(Identify type of correspondence)</i></p> <p>is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on</p> <p style="text-align: center;"><u><b>February 21, 2008</b></u> <i>(Date)</i></p> <div style="text-align: center;"><p><b>Veronica Torres</b> <i>(Typed or Printed Name of Person Mailing Correspondence)</i></p><p><i>[Handwritten Signature]</i> <i>(Signature of Person Mailing Correspondence)</i></p><p><b>EV 516732435 US</b> <i>("Express Mail" Mailing Label Number)</i></p></div>				
<p><b>Note: Each paper must have its own certificate of mailing.</b></p>				



**TRANSMITTAL LETTER**  
(General - Patent Pending)

Docket No.  
Canatcx-006:CIP

In Re Application Of: Hill, et al.

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/601,604	June 23, 2003	Igor N. Borissov	021897	3628	8916

Title:  
**Underground Gas Storage with Short Term Reversible Flow for Use in Arbitrage/Trading**

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

**Return Postcard;**  
**Check No. 22884, in the amount of \$230.00;**  
**Certificate of Express Mailing (EV 516732435 US);**  
**Combined Amendment Transmittal and Petition for Extension of Time; and**  
**Amendment (including remarks and status of claims)**

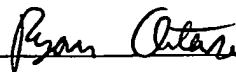
02/25/2008 ATRINH 00000012 10601604  
01 FC:2252

230.00 OP

in the above identified application.

- ☐ No additional fee is required.
- ☒ A check in the amount of \$230.00 is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 13-2166 as described below.
- ☐ Charge the amount of
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.
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Signature

Dated: February 21, 2008

Ryan S. Christensen  
Reg. No. 60,291  
The Matthews Firm (Customer No. 021897)  
2000 Bering Drive, Suite 700  
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US  
713-355-4200 Telephone  
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(Date)

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Correspondence

cc:



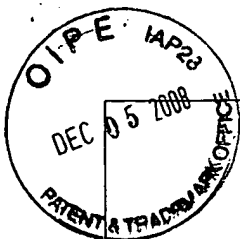
# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.												
10/601,604	06/23/2003	Ross K. Hill	CANATXX6:CIP	8916												
<div>21897 7590 06/05/2008</div> <div>THE MATTHEWS FIRM 2000 BERING DRIVE SUITE 700 HOUSTON, TX 77057</div> <div></div> <div><table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">BORISSOV, IGOR N</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>3628</td><td></td></tr><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>06/05/2008</td><td>PAPER</td></tr></table></div>					EXAMINER		BORISSOV, IGOR N		ART UNIT	PAPER NUMBER	3628		MAIL DATE	DELIVERY MODE	06/05/2008	PAPER
EXAMINER																
BORISSOV, IGOR N																
ART UNIT	PAPER NUMBER															
3628																
MAIL DATE	DELIVERY MODE															
06/05/2008	PAPER															

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## Office Action Summary

**Application No.**

10/601,604

**Applicant(s)**

HILL ET AL.

**Examiner**

Igor N. Borissov

**Art Unit**

3628

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02/21/2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 14 and 42 is/are pending in the application.  
4a) Of the above claim(s) 1-6 and 42 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_



## **DETAILED ACTION**

### ***Response to Amendment***

Amendment received on 02/21/2008 is acknowledged and entered. Claims 7-13, 15-41 have been canceled. Claims 1, 2 and 14 have been amended. New claim 42 has been added. Claims 1-6, 14 and 42 are currently pending in the application.

### ***Examiner's statement***

Amended Claim 1 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- A. Claims 1-6 and 42 drawn to a method for injecting gas in an underground formation, classified in class 405, subclass 53.
- B. Claim 14 drawn to an apparatus for trading in gas, classified in class 705, subclass 37.

Inventions A and B are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention A has utility separate from that of inventions B such as using an underground earth formation for gas storage. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, or patentability requirements, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention (trading in gas), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-6 and 42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennelley et al. (US 6,298,671 B1) in view of in view of Bishop (US 5,129,759) and further in view of Garnier (US 1,679,417).**

Claim 14. Kennelley et al. teaches a system for storing natural gas in subterranean formation and delivering the gas to a marketplace, comprising:

at least one low pressure underground salt formation storage facility operating in the pressure range of 200-2500 psi (C. 4, L. 11-17; C. 5, L. 6);

a natural gas pipeline connected with the at least one storage facility having natural gas therein (Fig. 1; C. 4, L. 18-25)

a trading system operable for making trades related to gas (suggests short trading) (C. 4, L. 55-56);

wherein the use of a computer is old and well known in the art for the benefit of saving time and avoiding possible human mistakes.

While Kennelley et al. teaches storing gas in the subterranean formation, Kennelley et al. does not specifically teach that said subterranean formation includes a salt formation. Also, Kennelley does not teach that the natural gas is caused to be injected into, and drawn from said storage facility through the same pipe.

Bishop teaches a method and system for storing natural gas in subterranean formation, wherein said formation is a salt formation (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kennelley et al. to include that said subterranean formation

includes a salt formation, as disclosed in Bishop, because it would advantageously allow to utilize subterranean formation of various types, thereby enhance the versatility of the system.

Garner teaches a gas pumping apparatus, wherein the gas is injected into, and drawn from an underground storage facility through the same pipe (Fig 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kennelley et al. and Bishop to include that said natural gas is caused to be injected into, and drawn from said storage facility through the same pipe, as disclosed in Bishop, because it would advantageously allow to save funds. Furthermore, in this case, each of the elements of the cited references combined by the Examiner performs the same function when combined as it does in the prior art. Thus, such a combination would have yielded predictable results. See *Sakraida*, 425 U.S. at 282, 189 USPQ at 453.

Therefore, Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* (KSR, 82 USPQ2d at 1396) forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex arte Smith*, -USPQ2d-, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007).

### ***Response to Arguments***

Applicant's arguments filed 02/21/2008 have been fully considered but they are not persuasive.

In response to applicant's argument that neither Kennelley et al. nor Bishop, alone or in combination, teach, disclose, or even suggest a single pipeline for both introducing gas into a shallow depth underground salt formation storage facilities and removing gas from a shallow depth underground salt formation storage facilities, it is noted that Garner was applied for this feature. Specifically, Garner discloses an arrangement for storing natural gas in underground formation wherein a single pipe is utilized for injecting the gas into and drawing the gas from said cavern (See the discussion above).

The remaining applicant's arguments essentially repeat the arguments presented above; therefore, the responses presented by the examiner above are equally applicable to the remaining applicant's arguments.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igor Borissov whose telephone number is 571-272-6801. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Igor N. Borissov/

Primary Examiner, Art Unit 3628

06/01/2008



# **Notice of References Cited**

Application/Control No.

10/601,604

Applicant(s)/Patent Under  
Reexamination  
HILL ET AL.

Examiner

Igor N. Borissov

Art Unit

3628

Page 1 of 1

## **U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2,550,844	05-1951	MEILLER DANIEL V; et. al.	48/190
*	B	US-6,412,508	07-2002	Swann, Jr., Philip Lawton	137/1
*	C	US-1,679,417	08-1928	GARNIER EDWARD J	417/28
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

## **FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

## **NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.